Mitigation Action Plan
For the
Griffith Energy Project

1.0 INTRODUCTION

1.1 HISTORY AND BACKGROUND

In March 1999, the U.S. Department of Energy (DOE), Western Area Power Administration (Western) distributed the Final Environmental Impact Statement for the Griffith Energy Project, DOE/EIS-0297. The Draft and Final EIS identifies potential adverse effects resulting from the Griffith Energy Project and discusses measures that Western will employ to mitigate potential adverse effects.

Western's Administrator signed the Record of Decision (ROD) on May 12, 1999. Western decided to enter into interconnection and construction agreements with Griffith Energy Limited Liability Corporation (Griffith) to provide the Griffith Power Plant interconnections with Western's Pacific Northwest-Pacific Southwest Intertie and Parker-Davis transmission systems, and to construct and operate transmission system additions to provide the interconnection with its transmission system. The interconnection to Western's transmission system will be provided via two new 230-kilovolt (kV) transmission lines, a new 230-/345-kV substation, and the upgrading of the existing Davis-Prescott 230-kV transmission line. The ROD also identified specific mitigation actions that will implemented as part of the project.

The DOE requirements for preparing a Mitigation Action Plan (MAP) are specified in 10 CFR 1021(Section 331(a), National Environmental Policy Act Implementing Procedures). These guidelines state that following completion of each EIS and its associated ROD, DOE shall prepare a MAP that addresses mitigation commitments expressed in the ROD. The MAP shall explain how the corresponding mitigation measures, designed to mitigate adverse environmental impacts associated with the course of action directed by the ROD, will be planned and implemented.

This MAP addresses the Peacock Substation, the new 230-kV transmission lines, the improvement of the existing Davis-Peacock 230-kV transmission line, and mitigation commitments made by Western for the Griffith Power Plant.

2.0 FUNCTION AND ORGANIZATION OF THE MITIGATION ACTION PLAN

The following sections describe the plans and actions by which Western will implement and verify mitigation action commitments expressed in the ROD.

Section 3.0 describes the monitoring and verification of mitigation actions and the reporting requirements. Section 4.0 describes the mitigation commitments and action plans for the Peacock Substation and the transmission line components, and the Griffith Power Plant. The commitment to the mitigation specified in the ROD is presented along with an action plan composed of the tasks, responsible party, and schedule anticipated for the mitigation.

3.0 MITIGATION ACTION PLAN MONITORING AND REPORTING SYSTEM

Section 5.d. (11)(f) of DOE Order 451.1A, National Environmental Policy Act Compliance Program, requires Western to report MAP activities in its Annual Site Environmental Report, published by January 31 of each year. This annual report will reflect new information or changed

circumstances. If major changes to mitigation included in this MAP are necessary, these changes will be described in the annual report. The annual report will be made available to the public and posted on Western's web site.

A member of Western's environmental staff will verify mitigation results and determine if the mitigation action achieved its intended purpose. Existing organizational and administrative controls will be used to gather information regarding implementation and status of mitigation actions. Such controls include applicable reporting systems, inspection, and verification. The results of inspection and verification will be reported on the anniversary of the Mitigation Action Plan in the annual report. When mitigation actions are completed and verified, the information will be included in the annual report.

Mitigation also may be monitored in accordance with Western's Mitigation Monitoring Policy (Attachment 1).

Griffith Energy has secured or will secure permits required by applicable Federal, State, and local environmental laws, orders, and regulations. For purposes of the MAP, the mitigation conditions set in the permits issued for the project are not addressed in this MAP, unless noted.

4.0 MITIGATION COMMITMENTS AND ACTION PLANS

Peacock Substation will be constructed on about 10 acres of land acquired from a private party. The substation will be located near the intersection of the Davis-Prescott 230-kV and Mead-Liberty 345-kV transmission lines in N.E. corner of Section 36, Township 22 North, Range 14 West, about 16 miles east of Kingman, Arizona. An existing road will be upgraded to provide vehicle and equipment access into the substation site.

Generic mitigation practices were defined for the new transmission line components, including the Peacock Substation. The generic mitigation practices were considered as impacts were assessed for the transmission components of the project. In some instances, environmental impacts were reduced with the employment of these mitigation measures. Western adopted the generic mitigation measures in its ROD. The MAP will ensure the generic mitigation practices are implemented.

The implementation of applicable generic mitigation measures for the construction and operation of the substation and transmission line components are presented in Table 4.1. The action plan for specific mitigation measures committed in the EIS for the substation and transmission line components are presented in Table 4.2. Lastly, Table 4.3 is the action plan for mitigation that Western committed to for the Griffith Power Plant.

Table 4.1: Action Plan for Applicable Generic Mitigation Measures for Peacock Substation, New Transmission Lines and Davis-Peacock Improvements.

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
1. All construction vehicle movement outside the ROW normally would be restricted to predesignated access, contractor acquired access, or public roads. No widening or upgrading of existing access roads would be undertaken in the area of construction and operation, except for repairs necessary to make roads passable, where soils or vegetation are very sensitive to disturbance.	G5600 G5600 G5600/G0400	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work	Complete Complete 12/99 – 02/00	Complete 02/00 02/00 – 09/00	06/00 10/00 10/00 – 02/01
2. The limits of construction activities normally would be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate limits of survey or construction activity. There will be no blading of new access roads unless approved by Western and the land management agency.	G5600 G5600 G5600/G0400	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work	Complete Complete 12/99 – 02/00	Complete 02/00 02/00 – 09/00	06/00 10/00 10/00 – 02/01
3. In construction areas where recontouring is not required, vegetation would be left in place wherever possible and original contour would be maintained to avoid excessive root damage and allow for resprouting.	G5600 G5600 G5600/G0400	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work	Complete Complete 12/99 – 02/00	11/99 02/00 02/00 – 09/00	06/00 10/00 10/00 – 02/01

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
4. In construction areas (e.g., marshaling yards, tower sites, spur roads from existing access roads) where ground disturbance is substantial or where recontouring is required, surface restoration would occur as required by the landowner or land management agency. The method of restoration normally would consist of returning disturbed areas back to their natural contour, reseeding (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches. To avoid fragmentation of desert bighorn habitat, fencing would not be used to close roads or otherwise limit access. Any new access roads not required for maintenance would be permanently closed using the most effective and least environmentally damaging methods appropriate to that area with concurrence of the landowner or land manager. These instances would be reviewed on a case-by-case basis.	G0400 G0400/G5600 Lands G5600 G5600	Task a: Prepare construction operation and maintenance plan Task b: Coordinate restoration activities with BLM. Task c: Determine landowner restoration needs Task d: Incorporate requirements into construction contract Task e: Monitoring	N/A N/A N/A N/A N/A	06/99 – 12/99 10/99 – 12/99 9/99 – 12/99 11/99 – 12/99 02/00 – 09/00	N/A 02/00 – 04/00 02/00 – 04/00 06/00 10/00 – 02/01
5. Watering facilities and other range improvements would be repaired or replaced, if they are damaged or destroyed by construction activities, to their condition prior to disturbance as agreed to by the parties involved.	G5600	Task a: Post-Construction Review	N/A	09/00	10/00
6. Towers and/or ground wire would be marked with highly visible devices where required by governmental agencies (e.g., Federal Aviation Administration) for aircraft safety.	A3900 G5600	Task a: Determine need for marking Task b: Install markers, if required	N/A N/A	Complete 03/00 – 09/00	02/00 – 04/00 10/00 – 02/01
7. Prior to construction, all supervisory construction personnel would be instructed on measures to protect cultural, paleontological, and ecological resources.	G5600/G0400	**Task a:** Advise construction contractor at preconstruction conference	Complete	02/00	10/00

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
8. Cultural resources would continue to be considered during post-EIS phases of Project implementation in accordance with the programmatic agreement that is being developed in conjunction with preparation of the EIS.	G0400/A3400	**Task a:** Conduct intensive survey	Complete	Complete	Complete
		Task b: Conduct ethnographic study	Complete	Complete	Complete
		Task c: Consult with tribes	Complete	Complete	Complete
		Task d: Consult with SHPO	Complete	01/00 – 02/00	01/00 – 02/00
		Task e: Determine project modifications	Complete	12/99 – 01/00	02/00 – 04/00
	G0400/G5600	**Task f:** Construction monitoring (Not required, unless arch. resources discovered)	Not required	03/00 – 09/00	10/00 – 02/01
9. Western would respond to individual complaints of radio or television interference generated by the transmission line by investigating the complaints and implementing appropriate mitigation measures (e.g., adjusting or using filtering devices on antennae). The transmission line would be patrolled on a regular basis so that damaged insulators or other transmission line materials, which could cause interference, are repaired or replaced.	G5000	Task a: Respond to complaints	Not applicable	On-going	On-going
		Task b: Transmission line Patrols		Quarterly	Quarterly
		Task c: Replace damaged insulators or conductor		As required	As required
10. Western would apply mitigation needed to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW to the mutual satisfaction of the parties involved.	G5000	Task a: Respond to complaints	Not applicable	On-going	On-going
11. Western would continue to monitor studies performed to determine the effects of audible noise and electrostatic and electric magnetic fields to ascertain whether these effects are significant.	G0400	**Task a:** Consult with Western's EMF Committee and EPRI	Annually	Annually	Annually

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
12. Roads would be built at right angles to the streams and washes to the extent practicable. Culverts would be installed where needed. All construction and maintenance activities would be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial streambanks. In addition, road construction would include dust-control measures during construction in sensitive areas. All existing roads would be left in a condition equal to or better than their condition prior to the construction of the transmission line.	G5600 G5600 G0400/G5600 G5600	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work **Task d:** Post-Construction review	Complete Complete 12/99 – 01/00 08/00	Complete 02/00 03/00 – 09/00 09/00	06/00 10/00 10/00 – 02/01 03/01
13. All requirements of those entities having jurisdiction over air quality matters would be adhered to and any permits needed for construction activities would be obtained. Open burning of construction trash would not be allowed unless permitted by appropriate authorities.	G5600 G5600 G0400/G5600	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor construction	Complete Complete 12/99 – 09/00	Complete 02/00 03/00 – 09/00	06/00 10/00 10/00 – 02/01
14. Fences and gates would be repaired or replaced to their original condition prior to Project disturbance as required by the landowner or the land management agency if they are damaged or destroyed by construction activities. Temporary gates would be installed only with the permission of the landowner or the land managing agency. Note: Permanent gates will be installed if needed for access for maintenance needs.	G5600 G5600 G0400/G5600 G5600	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work **Task d:** Post-Construction review	Complete Complete 12/99 – 01/00 09/00	Complete 02/00 03/00 – 09/00 09/00	06/00 10/00 10/00 – 02/01 03/01

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
15. Transmission line materials would be designed and tested to minimize corona. Tension would be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution would be exercised during construction to avoid scratching or nicking the conductor surface, which may provide points for corona to occur.	A3900 G5600	Task a: Design to minimize corona Task b: Monitor construction activities	Not Applicable Not Applicable	Complete 03/00 – 09/00	02/00 – 04/00 10/00 – 02/01
16. Nonspecular conductors, groundwires and dulled structure components would be used to reduce visual impacts.	A3900	Task a: Incorporate requirements into construction specification	Not Applicable	Complete	06/00
17. No nonbiodegradable debris would be deposited in the ROWs. Slash and other biodegradable debris would be left in place or disposed of in accordance with agency requirements.	G5600 G5600 G0400/G5600 G5600	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work **Task d:** Post-Construction review	Complete Complete 12/99 – 01/00 09/00	Complete 02/00 03/00 – 09/00 09/00	06/00 10/00 10/00 – 02/01 03/01
18. If required, mitigation measures developed during the consultation period under Section 7 of the Endangered Species Act would be adhered to as specified in the Biological Opinion of the U.S. DOI Fish and Wildlife Service. Also, mitigation developed in conjunction with state and tribal authorities would be adhered to.	G0400/A3400	**Task a:** Survey for peregrine falcon nests per conditions set by USFWS.	Complete	04/00	04/00
19. Hazardous materials would not be drained onto the ground or into streams or drainage areas. Totally enclosed containment would be provided for all trash. All construction waste including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials would be removed to a disposal facility authorized to accept such materials.	G5600 G5600 G0400/G5600 G5600	**Task a:** Incorporate requirement into construction specification **Task b:** Advise construction contractor **Task c:** Monitor site work **Task d:** Post-Construction review	Complete Complete 09/99 – 01/00 09/00	Complete 02/00 03/00 – 09/00 09/00	06/00 10/00 10/00 – 02/01 03/01

			Target Completion Date		
Generic and/or Selective Mitigation Commitment	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Improvements**
20. Near residences, the ROW would be aligned, to the extent practicable, to reduce impact on the residences and inhabitants.	G5600 G5600	Task a: Determine if residences are impacted by ROW Task b: Adjust alignment, if needed	Not applicable	12/99 12/99	02/00 04/99
21. Special status species or other species of particular concern would continue to be considered during post-EIS phases of Project implementation in accordance with management policies set forth by the appropriate land managing agency. This may entail conducting surveys for plant and wildlife species of concern along the proposed transmission line route and associated facilities (i.e., access and spur roads, staging areas) as agreed upon by the land managing agency and lead Federal agency. In cases where such species are identified, appropriate action would be taken to avoid adverse impacts on the species and its habitat and may include altering the placement of roads or towers as practicable and monitoring construction activities. Surface disturbing activities would be limited on the habitat for sensitive status plant species.	G0400 G5600 G5600 G0400/G5600	Task a: Determine if special status species are present Task b: Coordinate design with affected agencies and/or landowners. Task c: Adjust tower placement, if needed Task d: Monitor construction	Complete Not applicable Not applicable Not applicable	02/00 – 03/00 12/99 10/99 --11/99 03/00 -- 09/00	04/00 04/00 04/00 10/00 – 02/01
22. The alignment of any new access roads would follow the designated area's landform contours where possible, providing that such alignment does not additionally impact resource values. This would minimize ground disturbance and reduce scarring (visual contrast).	G5600	Task a: Determine new access road needs Task b: Coordinate new access road requirements with affected agencies and/or landowners Task c: Construct new roads consistent with agency/landowner requirements	No new access roads required	08/99 – 02/00 08/99 – 02/00 03/00 – 05/00	02/00 – 04/00 04/00 10/00 – 11/00

Table 4.2: Specific Mitigation Commitments and Action Plan

			Target Completion Date		
Commitment by EIS Section	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Upgrade**
Sec. 4.1.2.2: Structures would be designed for a moderate seismic zone	A3900	**Task a:** Design substation foundations for moderate seismic zone	Complete	Complete	02/00 – 04/00
Sec. 4.2.2.2: Spills would be contained, collected, and shipped to an appropriate waste disposal facility.	G0400 G0400	**Task a:** Evaluate need for spill, control and countermeasure plan, per 40 CFR 112. **Task b:** Develop plan, if needed. Task c: Incorporate spill containment requirements into construction specification	July 00 Aug 00 Complete	N/A N/A 09/99 – 10/99	N/A N/A 06/00
Sec. 4.5.2: Avoidance of riparian areas (other vegetation mitigation addressed under generic and selectively mitigation commitments).	G0400/G5600	**Task a:** Review structure and access road locations to ensure riparian areas are not impacted **Task b:** Adjust locations, if needed**.**	Not applicable	08/99 – 02/00 02/00 – 04/99	02/00 – 04/00 04/00
Sec. 4.5.2: Reseeding and plant salvaging per a BLM approved Reclamation Operation Maintenance Plan. Use third-party monitor in areas identified by BLM	G0400/G5600 G5600 G5600 G5600	**Task a:** Develop ROMP in consultation with BLM. **Task b:** Incorporate requirements into construction specification **Task c:** Contract with third party monitor **Task d:** Monitor construction, salvaging, replanting and reseeding	Not applicable	09/99 – 12/99 12/99 01/00 03/00 – 09/00	N/A
Sec. 4.6.2.2: Preconstruction surveys for raptor nests.	G0400/A3400	**Task a:** Conduct aerial surveys	Complete, None identified	04/00	04/00

			Target Completion Date		
Commitment by EIS Section	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Upgrade**
Sec. 4.6.2.2: A desert tortoise mitigation plan (Item 10 of Table 2.1-4 in the Final EIS) will be implemented, which will include preconstruction surveys and compensation for unmitigated impacts. The	G0400/G5600 G5600 G5600 G0400 G0400/G5600	**Task a:** Coordinate requirements with BLM **Task b:** Incorporate applicable requirements into the construction specification **Task c:** Contract with biological montior **Task d:** Preconstruction desert tortoise survey by a qualified biologist **Task e:** Educate construction workers	Not Applicable	Complete Complete 01/99 03/00 02/00	02/00 – 04/00 06/00 09/00 09/00 10/00
Sec. 4.6.2.2: ROW construction, restoration, maintenance and termination activities in designated areas would be modified or discontinued during sensitive periods for candidate, proposed, threatened and endangered, or other sensitive animal species (per selective mitigation in Table 2.1-4). Avoidance of construction during breeding of mountain plovers, if present	G0400/G5600	**Task a:** Incorporate requirements into construction specification	None identified	None identified	Mountain plover not present per consultation with BLM
Sec. 4.7.2.2: Hualapai tribal participation in the intensive cultural resource surveys for the new transmission lines and the upgrade of the existing Davis-Prescott line	G0400/G5600	**Task a:** Ensure applicant contracts with the Hualapai	Complete	Complete	Complete
Sec. 4.7.2.2: In locations identified during cultural resource inventory as having the potential to contain sensitive cultural resources to the Hualapai Tribe, Hualapai representatives will be invited to monitor right-of-way blading and construction.	G0400/A3400	**Task a:** Consult with Hualapai on results of intensive cultural resource survey **Task b:** If needed, modify structure and access road locations, if possible, and/or explore mitigation	Complete	01/00 01/00	10/99 04/00

			Target Completion Date		
Commitment by EIS Section	**Responsible Party**	**Action**	**Peacock Sub**	**New TL's**	**Davis-Pea Upgrade**
Sec. 4.8.2.2: Coordination with interested property owners on structure siting to reduce land use and visual impacts.	Lands G5600 G5600/A3900	**Task a:** Determine land owner interest during land acquisition phase of project **Task b:** Share structure locations with interested land owners **Task c:** Adjust structure locations, if needed.	Not applicable	09/99 – 01/00 01/00 01/00	N/A 02/00 – 04/00 04/00

Table 4.3: Action Plan for Western's Mitigation Commitments for the Griffith Power Plant

Commitment per ROD	Responsible Party	Action	Target Completion Date
1. Western's review and approval of dust control procedures for the construction of the Griffith Power Plant as required by the ADEQ air permit.	G0400	**Task a:** Review dust control provisions stipulated in ADEQ permit. **Task b:** Approve or suggest modifications to dust control provisions.	Complete Complete
2. Power plant lighting compliance with Mohave County illumination ordinances and us of partially-or fully-shielded fixtures during darkness.	G0400	**Task a:** Consult with Griffith Energy on design of plant lighting. **Task b:** Compare design parameters with applicable Mohave County ordinances. **Task c:** Consult with Griffith on any differences	March 00 April 00 May 00
3. Painting plant with colors similar to the surrounding landscape	G0400	**Task a:** Consult with Griffith Energy on design of plant coloring. **Task b:** Compare design parameters with EIS commitments. **Task c:** Consult with Griffith on any differences	March 00 April 00 May 00

Commitment per ROD	Responsible Party	Action	Target Completion Date
4. Monitoring and reporting of waterfowl use and impacts at the brine disposal pond.	G0400	**Task a:** Define monitroing and reporting requirements. Task b: Incorporate monitoring and reporting requirements into interconnection agreement. Task c: Review monitoring reports. Task d: Consult with Arizona Game and Fish Department on monitoring results. Task e: If problem is encountered, explore additional mitigation with Griffith and AGFD.	Complete Complete Quarterly Annually

Attachment 1

Mitigation Monitoring

Policy: Western will ensure that we fulfill our commitments to mitigate the environmental effects of our activities.

Background: Western routinely commits to specific actions for the protection of cultural and biological components of the environment from adverse effects of our activities. For example, before a pole-replacement project, Western might locate an endangered plant community on the transmission right-of-way. The NEPA document for the project would most likely specify that the maintenance crews would avoid the plants. Western routinely commits to implement stormwater pollution prevention strategies, reduce visual impacts, undertake erosion control, limit use of pesticides, and avoid cultural sites, wetlands, riparian areas and other important habitats.

Such commitments often expedite the clearance process and allow Western to proceed with minimum expense and delay. A project, which would otherwise require an EA/FONSI, might be cleared with a CX because Western committed to avoid important environmental resources, thus eliminating adverse effects. In addition, meeting these commitments enhances Western's reputation
for responsible environmental stewardship with regulators, land managing agencies, Native American tribes, and private landowners.

To preserve these benefits, Western must ensure that we carry out the mitigation actions to which we commit.

When Western makes mitigation commitments, DOE requires a mitigation action plan that describes how mitigation will be planned and implemented. In such projects annual mitigation reporting is required and will be submitted with Western's annual NEPA planning summary. The reporting is required until the mitigation is completed.

Process: Western will audit selected projects for mitigation compliance. Projects will be chosen with the following considerations:

- National Register eligibility of cultural resources; presence of fossils
- Sensitivity and importance of biological resources present
- Size and scope of project
- Interest from stakeholders
- Mitigation reporting requirements

In addition, some projects will be selected at random.

Western will keep records in each regional office of monitored projects and findings. This information will be used at least annually to assess the effectiveness of mitigation methods and the effectiveness of Western's processes for ensuring that mitigation is carried out as planned. Western will take corrective action as soon as deficiencies are identified. The results of mitigation monitoring will be reported in the Annual Site Environmental Report.